Exhibit 25

CHART FOR U.S. PATENT NO. 8,160,070 ("the '070 Patent")

Accused Products:

Dell's products, including but not limited to its PowerEdge MX Networking Architecture products (*e.g.*, MX7000 Modular Chassis) with "Dell EMC OpenManage Enterprise Modular (OME-Modular)" ("Accused Products"), infringe at least Claim 1 of the '070 Patent.

Claims	Exemplary Evidence of Infringement
1 [pre] A fibre channel proxy, comprising:	To the extent the preamble is limiting, the Accused Products comprise a fiber channel proxy. For example, the Accused Products comprise "three I/O fabrics" where "Fabric C is for . . . Fibre Channel (FC) connectivity" and include two "Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2" for "accessing data on external storage" where the "MXG610s features up to 32 Fibre Channel ports." For example, the Accused Products use "FC identities" which "are virtual identities required by a device to support FC operations" and an "Identity Pool wizard . . . for defining an FC virtual identity pool." For example, the Accused Products include a "PowerEdge M9002m management module" with "management module (MM) firmware" on which the "Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs" which "manage[s] the . . . input or output modules (IOMs), and storage devices." *See, e.g.*:

Claims	Exemplary Evidence of Infringement

Figure 1. Front view of the enclosure

1. Left control panel
2. Single-width compute sled
3. Sled blank
4. Front fan (4)
5. Double-width compute sled
6. Single-width storage sled
7. Right control panel
8. Information tag
9. Power supply unit (6)

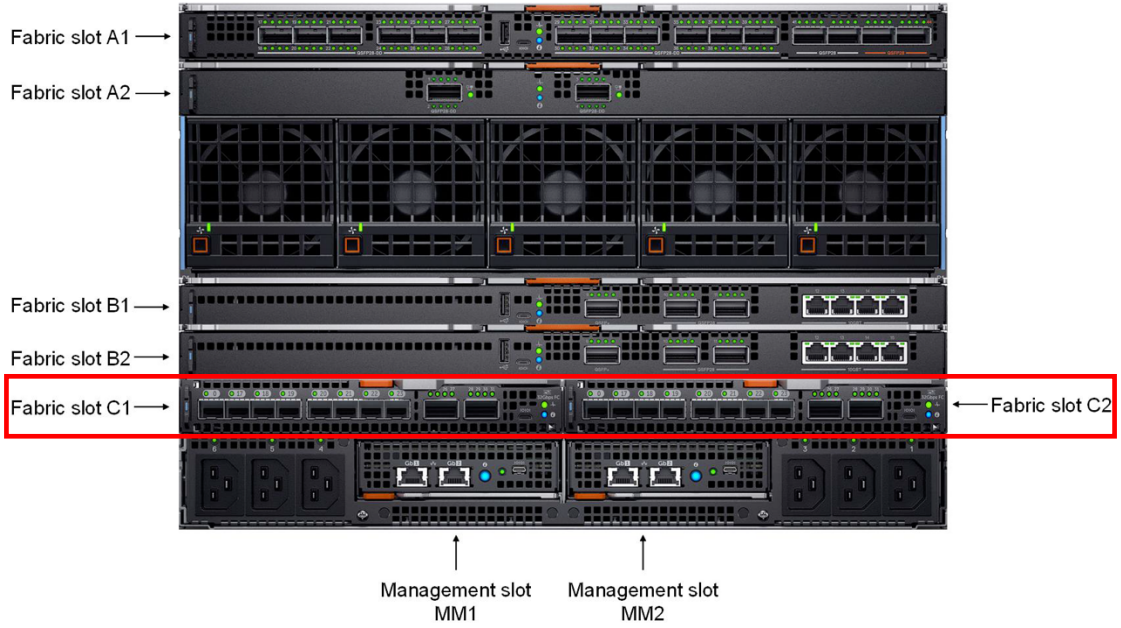
Dell EMC PowerEdge MX7000 Technical Guide

Claims	Exemplary Evidence of Infringement

The Dell EMC PowerEdge MX, a unified, high-performance data center infrastructure, provides the agility, resiliency, and efficiency to optimize a wide variety of traditional and new, emerging data center workloads and applications. With its kinetic architecture and agile management, PowerEdge MX dynamically configures compute, storage, and fabric, increases team effectiveness and accelerates operations. Its responsive design and delivers the innovation and longevity customers of all sizes need for their IT and digital business transformations.

The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with:

- One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1
- One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2
- Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2
- Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2
- Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2



Claims	Exemplary Evidence of Infringement
	Dell EMC PowerEdge MX Networking Architecture Guide The Dell EMC Networking MXG610s has a flexible architecture which enables enterprises to dynamically scale connectivity and bandwidth with the latest generation of Fibre Channel for the PowerEdge MX7000. The MXG610s features up to 32 Fibre Channel ports, which auto-negotiate to 32, 16, or 8 Gbps speed. The MXG610s offers 16 internal server facing ports which auto-negotiate between 32 Gbps and 16 Gbps, allowing customers to implement the right bandwidth for their needs today, with the ability to increase that bandwidth in the future with Ports-on-Demand capability. There are 8 external The Dell EMC Networking MXG610s 32G Fibre Channel IO Module for the PowerEdge MX7000 is the right choice for mission-critical applications accessing data on external storage. The MXG610s provides industry-leading performance with the latest generation of Fibre Channel. It empowers enterprises to dynamically scale connectivity and bandwidth with Ports-on-Demand (PoD), provides consolidated management for an agile management structure and simplified server and storage connectivity, and employs a responsive design which protects enterprise's infrastructure with inherent security and with non-disruptive upgrades to NVMe over Fibre Channel. MXG610s SPEC SHEET FC identities are virtual identities required by a device to support virtual FC operations. The FC page of the Identity Pool wizard is used to define a sub-pool to use for generating unique FC virtual identities. The following values are specified to define a sub-pool for generating unique FC virtual identities: • Starting Postfix and Count As mentioned earlier, Fibre Channel requires 8-octet virtual WWNN addresses (for nodes) and virtual WWPN addresses (for ports on a node). In MX7000 Chassis, the Identity Pool wizard page for defining an FC virtual identity pool has a starting postfix value, which takes a 6-octet value, and a count. Like it does for generating unique FC virtual WWNN and WWPN addresses for FCoE (as discussed above), MX7000 Chassis prepends a two-octet prefix to each 6-octet value defined by the Postfix and Count values entered for a pool. The same PowerEdge MX7000: Templates and Profiles

Claims	Exemplary Evidence of Infringement
	The Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs on the PowerEdge M9002m management module (MM) firmware. OME-Modular facilitates configuration and management of a standalone PowerEdge MX chassis or group of MX chassis using a single Graphical User Interface (GUI). You can use OME-Modular to deploy servers and update firmware. You can also manage the overall health of the chassis and the chassis components such as compute sleds, network devices, input or output modules (IOMs), and storage devices. OME-Modular also facilitates the following activities on the hardware: • Connectivity of management network. • Discovery and inventory. • Monitoring and power control operations and thermal functions. You can use OME-Modular to manage key workloads on the MX7000 platforms. Dell EMC OpenManage Enterprise-Modular Edition for PowerEdge MX7000 Chassis The most common connectivity method, NPIV Proxy Gateway mode (NPG) is used when connecting PowerEdge MX to a storage area network that hosts a storage array. NPG mode is simple to implement as there is little configuration that must be done. The NPG switch converts FCoE from the server to native FC and aggregates the traffic into an uplink. The NPG switch is effectively transparent to the FC SAN, which "sees" the hosts themselves. This mode is supported only on the MX9116n FSE. OS10 supports configuring N_Port mode on an Ethernet port that connects to converged network adapters (CNA). NPG node port (N_Port) is a port on a network node that act as a host or initiator device and is used in FC point-to-point or FC switched fabric. N_Port ID Virtualization (NPIV) allows multiple N_Port IDs to share a single physical N_Port. Dell Technologies PowerEdge MX – Networking – Deployment Guide
1 [a] a first set of one or more fibre channel proxy ports configured to receive storage operations from one or more initiators;	The Accused Products comprise a first set of one or more fibre channel proxy ports configured to receive storage operations from one or more initiators. For example, the Accused Products comprise "three I/O fabrics" where "Fabric C is for . . . Fibre Channel (FC) connectivity" and include two "Dell EMC NetworkingMXG610s Fibre Channel switches installed in fabric slots C1 and C2" for "accessing data on external storage" where the "MXG610s features up to 32 Fibre Channel ports" with "16 internal server facing ports." For example, the Accused Products use "FC identities" which "are virtual identities required by a device to support FC operations" and an "Identity Pool wizard . . . for defining an FC virtual identity pool." For example, the Accused Products include one "Dell EMC Networking MX9116n Fabric Switching Engine (FSE)" and a "PowerEdge M9002m management module" with "management module (MM) firmware" on which the "Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs" which "manage[s] the . . . input or output modules (IOMs), and storage devices."

Claims	Exemplary Evidence of Infringement
	See, e.g.: The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 Dell EMC PowerEdge MX Networking Architecture Guide The Dell EMC Networking MXG610s has a flexible architecture which enables enterprises to dynamically scale connectivity and bandwidth with the latest generation of Fibre Channel for the PowerEdge MX7000. The MXG610s features up to 32 Fibre Channel ports, which auto-negotiate to 32, 16, or 8 Gbps speed. The MXG610s offers 16 internal server facing ports which auto-negotiate between 32 Gbps and 16 Gbps, allowing customers to implement the right bandwidth for their needs today, with the ability to increase that bandwidth in the future with Ports-on-Demand capability. There are 8 external MXG610s SPEC SHEET

Claims	Exemplary Evidence of Infringement
	FC identities are virtual identities required by a device to support virtual FC operations. The FC page of the Identity Pool wizard is used to define a sub-pool to use for generating unique FC virtual identities. The following values are specified to define a sub-pool for generating unique FC virtual identities: • Starting Postfix and Count As mentioned earlier, Fibre Channel requires 8-octet virtual WWNN addresses (for nodes) and virtual WWPN addresses (for ports on a node). In MX7000 Chassis, the Identity Pool wizard page for defining an FC virtual identity pool has a starting postfix value, which takes a 6-octet value, and a count. Like it does for generating unique FC virtual WWNN and WWPN addresses for FCoE (as discussed above), MX7000 Chassis prepends a two-octet prefix to each 6-octet value defined by the Postfix and Count values entered for a pool. The same prefixes are used as were indicated for FCoE. PowerEdge MX7000: Templates and Profiles The Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs on the PowerEdge M9002m management module (MM) firmware. OME-Modular facilitates configuration and management of a standalone PowerEdge MX chassis or group of MX chassis using a single Graphical User Interface (GUI). You can use OME-Modular to deploy servers and update firmware. You can also manage the overall health of the chassis and the chassis components such as compute sleds, network devices, input or output modules (IOMs), and storage devices. OME-Modular also facilitates the following activities on the hardware: • Connectivity of management network. • Discovery and inventory. • Monitoring and power control operations and thermal functions. You can use OME-Modular to manage key workloads on the MX7000 platforms. Dell EMC OpenManage Enterprise-Modular Edition for PowerEdge MX7000 Chassis
1 [b] a second set of one of one or more fibre channel proxy ports configured to forward the storage operations to	The Accused Products comprise a second set of one of one or more fibre channel proxy ports configured to forward the storage operations to one or more storage targets. For example, the Accused Products comprise "three I/O fabrics" where "Fabric C is for . . . Fibre Channel (FC) connectivity" and include two "Dell EMC NetworkingMXG610s Fibre Channel switches installed in fabric slots C1 and C2" for "accessing data on external storage" where the "MXG610s features up to 32 Fibre Channel ports." For example, the Accused Products use "FC interfaces . . . to connect to storage." For example, the Accused Products use "FC identities" which "are virtual identities required by a device to support FC operations" and an "Identity Pool wizard . . . for defining an FC virtual identity pool." For example, the Accused Products include a

Claims	Exemplary Evidence of Infringement
one or more storage targets; and	"PowerEdge M9002m management module" with "management module (MM) firmware" on which the "Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs" which "manage[s] the . . . input or output modules (IOMs), and storage devices." For example, the Accused Products use "NPIV Proxy Gateway mode (NPG) . . . when connecting PowerEdge MX to a storage area network that hosts a storage array" where a "NPG node port (N_Port) id a port on a network node that act[s] as a host or initiator device," making the "NPG switch . . . effectively transparent to the FC SAN, which 'sees' the hosts themselves." *See, e.g.*: The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 Dell EMC PowerEdge MX Networking Architecture Guide The Dell EMC Networking MXG610s 32G Fibre Channel IO Module for the PowerEdge MX7000 is the right choice for mission-critical applications accessing data on external storage. The MXG610s provides industry-leading performance with the latest generation of Fibre Channel. It empowers enterprises to dynamically scale connectivity and bandwidth with Ports-on-Demand (PoD), provides consolidated management for an agile management structure and simplified server and storage connectivity, and employs a responsive design which protects enterprise's infrastructure with inherent security and with non-disruptive upgrades to NVMe over Fibre Channel. MXG610s SPEC SHEET

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	FC identities are virtual identities required by a device to support virtual FC operations. The FC page of the Identity Pool wizard is used to define a sub-pool to use for generating unique FC virtual identities. The following values are specified to define a sub-pool for generating unique FC virtual identities: • Starting Postfix and Count As mentioned earlier, Fibre Channel requires 8-octet virtual WWNN addresses (for nodes) and virtual WWPN addresses (for ports on a node). In MX7000 Chassis, the Identity Pool wizard page for defining an FC virtual identity pool has a starting postfix value, which takes a 6-octet value, and a count. Like it does for generating unique FC virtual WWNN and WWPN addresses for FCoE (as discussed above), MX7000 Chassis prepends a two-octet prefix to each 6-octet value defined by the Postfix and Count values entered for a pool. The same prefixes are used as were indicated for FCoE. PowerEdge MX7000: Templates and Profiles The Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs on the PowerEdge M9002m management module (MM) firmware. OME-Modular facilitates configuration and management of a standalone PowerEdge MX chassis or group of MX chassis using a single Graphical User Interface (GUI). You can use OME-Modular to deploy servers and update firmware. You can also manage the overall health of the chassis and the chassis components such as compute sleds, network devices, input or output modules (IOMs), and storage devices. OME-Modular also facilitates the following activities on the hardware: • Connectivity of management network. • Discovery and inventory. • Monitoring and power control operations and thermal functions. You can use OME-Modular to manage key workloads on the MX7000 platforms. Dell EMC OpenManage Enterprise-Modular Edition for PowerEdge MX7000 Chassis Configure the port group for the FC interfaces used to connect to storage. In the deployment example here, port-group 1/1/16 is configured for breakout from 1x64 GFC to 4x16 GFC. Dell Technologies PowerEdge MX – Networking – Deployment Guide

Claims	Exemplary Evidence of Infringement
	Delivering industry leading performance in a modular switch, the non-blocking switching architecture in the MX9116n provides line-rate 25GbE L2 and L3 forwarding capacity to all connected servers with no oversubscription and a sub 450ns latency. In addition to 16 internal 25GbE ports, the MX9116n provides four QSFP28 100GbE ports for uplinks and twelve QSFP28-Double Density ports. These QSFP28-DD ports provide capacity for additional uplinks, ICLs, connections to rack servers at 10GbE or 25GbE via breakout cables, and fabric expansion connections for up to 9 additional MX7000 chassis. MX9116n Fabric Switching Engine Specification Sheet The most common connectivity method, NPIV Proxy Gateway mode (NPG) is used when connecting PowerEdge MX to a storage area network that hosts a storage array. NPG mode is simple to implement as there is little configuration that must be done. The NPG switch converts FCoE from the server to native FC and aggregates the traffic into an uplink. The NPG switch is effectively transparent to the FC SAN, which "sees" the hosts themselves. This mode is supported only on the MX9116n FSE. OS10 supports configuring N_Port mode on an Ethernet port that connects to converged network adapters (CNA). NPG node port (N_Port) is a port on a network node that act as a host or initiator device and is used in FC point-to-point or FC switched fabric. N_Port ID Virtualization (NPIV) allows multiple N_Port IDs to share a single physical N_Port. Dell Technologies PowerEdge MX – Networking – Deployment Guide
1 [c] a processor configured to:	The Accused Products comprise a processor. For example, the Accused Products include one "MX9116n Fabric Switching Engine (FSE)" with "SmartFabric OS10" "Software" that "can support eight 32Gb Fibre Channel connections . . . enabling direct attachment of a FC storage array and as a NPIV Proxy Gateway to an existing FC SAN." For example, the Accused Products include two "MX9002m modules," where the "MX9002m management module hosts . . . OpenManage Enterprise – Modular (OME-M) console" which is an "application [that] runs on the PowerEdge M9002m management module (MM) firmware)" that "facilitates configuration and management of" the Accused Products. For example, the Accused Products include two "MXG610s Fibre Channel switches" each of which include a "dual-core T1022E processor." *See, e.g.*:

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	The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 The Dell EMC PowerEdge MX9002m management module controls the overall chassis power, cooling, and hosts the OpenManage Enterprise - Modular (OME-M) console. Two external 1G-BaseT Ethernet ports are provided to enable management connectivity and to connect more MX7000 chassis into a single logical chassis. The MX7000 chassis supports two MX9002m modules for redundancy. Figure 7 shows a single Dell EMC PowerEdge MX Networking Architecture Guide The Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs on the PowerEdge M9002m management module (MM) firmware. OME-Modular facilitates configuration and management of a standalone PowerEdge MX chassis or group of MX chassis using a single Graphical User Interface (GUI). You can use OME-Modular to deploy servers and update firmware. You can also manage the overall health of the chassis and the chassis components such as compute sleds, network devices, input or output modules (IOMs), and storage devices. OME-Modular also facilitates the following activities on the hardware: • Connectivity of management network. • Discovery and inventory. • Monitoring and power control operations and thermal functions. You can use OME-Modular to manage key workloads on the MX7000 platforms. Dell EMC OpenManage Enterprise-Modular Edition for PowerEdge MX7000 Chassis

Claims	Exemplary Evidence of Infringement
	The MXG610s is a 32-port 32, 16, 8 Gbps FC switch module that provides the following hardware features: ● 16 internal backplane FC ports to connect with the FC controller on server blades ○ The internal ports support 16-Gbps or 32-Gbps speed ○ The internal ports support F_Port mode and N_Port mode for NPIV connection from the HBA ● 16 external FC ports to connect with external FC storage or an FC switch ○ Eight external SFP+ ports and two QSFP ports that can operate as 4x 32 Gbps each ○ All external SFP+ ports autonegotiate to 8-, 16-, or 32-Gbps speeds when you use 32-Gbps SFP+ transceivers ○ All external SFP+ ports autonegotiate to 8- or 16-Gbps speeds when you use 16-Gbps SFP+ transceivers ○ All QSFP ports auto negotiate to 16- or 32-Gbps speeds ○ The QSFP ports support breakout cables to example four uplinks ● All external ports support ○ F_Port, N_Port,D_Port, and E_Port modes ○ Connecting with another FC switch module through E_Port-to-E_Port mode or through N_Port(NPIV)-to-F_Port mode ○ Dynamic load sharing (DLS) and dynamic path selection (DPS) using exchange-based balancing when operating as E_Ports ○ Only ISL connections are supported on the QSFP ports. Interchassis link (ICL) connections are not supported on the MXG610s QSFP ports ● A dual-core T1022E processor operating at 1.2 GHz delivers high performance, scalability, and advanced fabric vision functionality. MXG610s Fibre Channel Switch Module Installation Guide

Claims	Exemplary Evidence of Infringement

Product	Description
MX9116n Fabric Switching Engine	
Optics	Transceiver, 2x100/2x80GbE Multi-rate, 2SR4 QSFP28-DD Transceiver, 2x100GbE, 2SR4 QSFP28-DD Transceiver, 2x40GbE, 2SR4 QSFP28-DD Transceiver, 100GbE, SR4 QSFP28 Transceiver, 100GbE, LR4 QSFP28 Transceiver, 100GbE, ESR4 QSFP28 Transceiver, 100GbE, PSM4 500m QSFP28 Transceiver, 100GbE, CWDM4 2Km QSFP28 Transceiver, 100GbE, SWDM4 100m QSFP28 Transceiver, 100GbE, BIDI optic QSFP28 Transceiver, 40GbE, SR4 optic QSFP+ Transceiver, 40GbE, eSR4 optic QSFP+ Transceiver, 40GbE, LR4 optic QSFP+ Transceiver, 40GbE, BIDI optic QSFP+ Transceiver, 40GbE, PSM4 10Km QSFP+ Transceiver, 40GbE, LM4 Duplex QSFP+ Transceiver, 40GbE, SM4 Duplex QSFP+ Transceiver, 4x32G FC SW optic QSFP28 Transceiver, 4x16G FC SW optic QSFP+
Cables	2x 100GbE, QSFP28-DD to QSFP28-DD, active optical, passive DAC 2x 100GbE, QSFP28-DD to 2xQSFP28, active optical, passive DAC 2x 100GbE, QSFP28-DD to 8xSFP28 (8x10/25GbE), active optical, passive DAC 2x 100GbE, MPO12-DD to MPO12-DD optical 2x 100GbE, MPO12DD to 2xMPO12 optical breakout 2x 100GbE, MPO12DD to 8xLC optical breakout 2x 40GbE, QSFP28-DD to 2xQSFP+, active optical, passive DAC 2x 40GbE, QSFP28-DD to 8xSFP+ (8x10/10GbE), active optical, passive DAC 100GbE, QSFP28 to QSFP28, active optical, passive DAC 100GbE, QSFP28 to 4xSFP28 (4x10/25GbE), active optical, passive DAC 100GbE, MTP to MTP optical 100GbE, MTP to 4xLC optical breakout 40GbE, QSFP+ to QSFP+, active optical & passive DAC 40GbE, QSFP+ to 4xSFP+ (4x10GbE), active optical & passive DAC
Software	SmartFabric OS10 Select third-party operating system offerings (future)

Claims	Exemplary Evidence of Infringement
	The Dell EMC Networking MX9116n Fabric Switching Engine is a scalable, high-performance, low latency 25Gbps Ethernet switch purpose-built for the PowerEdge™ MX platform providing enhanced capabilities and cost-effectiveness for the enterprise, mid-market, Tier 2 cloud and NFV service providers with demanding compute and storage traffic environments. The MX9116n is fully IEEE data center bridging (DCB) compliant, supporting iSCSI, NAS, and FCoE transit. Two of the QSFP28 ports can support eight 32Gb Fibre Channel connections (4 per QSFP28), enabling direct attachment of a FC storage array and as a NPIV Proxy Gateway to an existing FC SAN. The Dell EMC Networking SmartFabric OS10 is a Network Operating System supporting multiple architectures and environments. The networking world is moving from a monolithic stack to a pick-your-own-world. The OS10 solution is designed to allow multi-layered disaggregation of network functionality. While OS10 contributions to Open Source provide users freedom and flexibility to pick their own 3rd party networking, monitoring, management and orchestration applications, OS10 bundles an industry hardened networking stack featuring standard L2 and L3 protocols over a standard and well accepted CLI interface. MX9116n Fabric Switching Engine Specification Sheet
1 [c] [i] map storage access locations received in the storage operations from the one or more initiators to different storage blocks in the one or more storage targets;	The Accused Products map storage access locations received in the storage operations from the one or more initiators to different storage blocks in the one or more storage targets. For example, the Accused Products are "designed for the modern software-defined data center," include "up to 8 PowerEdge MX740c" or up to "4 PowerEdge MX840c . . . Server Sleds," "up to 7 PowerEdge MX5016s . . . Storage Sleds," and "OpenManage Enterprise – Modular Edition . . . Embedded Management." For example, the "Ideal workloads" for the "MX740c . . . PowerEdge MX Component[]" are "[v]irtualization, software-defined . . . workloads," and the "Ideal workloads" for the "MX740c . . . PowerEdge MX Component[]" are "[s]oftware-defined." For example, the Accused Products' "MX740c" includes one or more "PERC card[s]" where "PERC" refers to a "PowerEdge RAID Controller" that "[o]ffers RAID control capabilities." For example, "RAID . . . processes data reads and write to physical disks," and "RAID concepts" include "[s]triping" which "writes data across all physical disks in a virtual disk" where each "stripe consists of consecutive virtual disk data addresses that are mapped in fixed-size units to each physical disk in the virtual disk . . . ." For example, the Accused Products provide for "mapping volumes to the target host." For example, the Accused Products "provide management support for 'virtual identities'" where "devices can assume a set of alternate identity values, called a virtual identity, and function on the network using that identity, as if the virtual identity were its factory-installed identity." For example, the Accused Products use "FC identities," which are virtual identities required by a device to support virtual FC operations" and include an "Identity Pool wizard page for defining an FC virtual identity pool." For example, the Accused Products include one "MX9116n Fabric Switching Engine (FSE)" with "SmartFabric OS10"

Claims	Exemplary Evidence of Infringement
	"Software" that "can support eight 32Gb Fibre Channel connections . . . enabling direct attachment of a FC storage array and as a NPIV Proxy Gateway to an existing FC SAN." *See, e.g.*: Devices come with unique manufacturer-assigned identity values pre-installed (such as a factory-assigned MAC address). Those identities are fixed and never change. However, devices can assume a set of alternate identity values, called a "virtual identity", and function on the network using that identity, as if the virtual identity were its factory-installed identity. The use of virtual identity is the basis for stateless operations. MX7000 Chassis provides management support for "virtual identities". Just like factory-installed identities, virtual identities must also be unique on the network. Using virtual identities enables MX7000 Chassis to support operations such as shifting (migrating) a full device configuration, including its virtual identity, from one server to another. In other words, a virtual identity can be removed from one device and assigned to a different device (for example, in case the original device stops working or needs maintenance). PowerEdge MX7000: Templates and Profiles

Claims	Exemplary Evidence of Infringement
	The Dell EMC OpenManage Enterprise Modular (OME-Modular) application runs on the PowerEdge M9002m management module (MM) firmware. OME-Modular facilitates configuration and management of a standalone PowerEdge MX chassis or group of MX chassis using a single Graphical User Interface (GUI). You can use OME-Modular to deploy servers and update firmware. You can also manage the overall health of the chassis and the chassis components such as compute sleds, network devices, input or output modules (IOMs), and storage devices. OME-Modular also facilitates the following activities on the hardware: ● Connectivity of management network. ● Discovery and inventory. ● Monitoring and power control operations and thermal functions. You can use OME-Modular to manage key workloads on the MX7000 platforms. ● Large and unstructured data and analytics ● Hyper converged and traditional workloads ● Database workloads ● Software defined storage ● HPC and performance workloads The lead chassis in the Multi Chassis Management (MCM) enables you to perform the following tasks: ● Manage servers across multiple MX chassis. ● Deploy or update servers from lead chassis without launching the member chassis web interface. ● Manage fabric switch engines in fabric mode using the OME-Modular web interface. ● Manage alert log and actions. ● Manage virtual MAC/WWN identity pools. ● Deploy compute sleds easily using server profiles and templates. Dell EMC OpenManage Enterprise-Modular Edition for PowerEdge MX7000 Chassis

Claims	Exemplary Evidence of Infringement
	FC identities are virtual identities required by a device to support virtual FC operations. The FC page of the Identity Pool wizard is used to define a sub-pool to use for generating unique FC virtual identities. The following values are specified to define a sub-pool for generating unique FC virtual identities: • Starting Postfix and Count As mentioned earlier, Fibre Channel requires 8-octet virtual WWNN addresses (for nodes) and virtual WWPN addresses (for ports on a node). In MX7000 Chassis, the Identity Pool wizard page for defining an FC virtual identity pool has a starting postfix value, which takes a 6-octet value, and a count. Like it does for generating unique FC virtual WWNN and WWPN addresses for FCoE (as discussed above), MX7000 Chassis prepends a two-octet prefix to each 6-octet value defined by the Postfix and Count values entered for a pool. The same prefixes are used as were indicated for FCoE. PowerEdge MX7000: Templates and Profiles

Claims	Exemplary Evidence of Infringement
	## SmarFabric mode This example shows directly attaching a Dell PowerStore 1000T storage array to the MX9116n FSE using universal ports 44:1 and 44:2. **NOTE:** The MX5108n Ethernet Switch does not support this feature. This example assumes that an existing SmartFabric has been created and is fully operational. For instructions on creating a SmartFabric, see SmartFabric Creation. To configure NPG mode on an existing SmartFabric, the following steps are completed using the OME-M console: 1. Connect the storage array to the MX9116n FSE. Each storage controller is connected to each MX9116n FSE. • Define FCoE VLANs to use in the fabric. For instructions, see Define VLANs. • Make sure that chassis are in a Multi-Chassis Management group. For instructions, find the relevant version of the User Guide in the OME-M and OS10 compatibility and documentation table. 2. If necessary, create Identity Pools. See the Create identity pools section for more information about how to create identity pools. 3. Configure the physical switch ports for FC operation. See the Configure Fibre Channel universal ports section for instructions. 4. Create the FC Direct Attached uplinks. For more information about creating uplinks, see the Create Fibre Channel uplinks section. 5. Create and deploy the appropriate server templates to the compute sleds. See Server Deployment for more information. 6. Configure zones and zone sets. See the Managing Fibre Channel Zones on MX9116n FSE section for instructions. Once the server operating system loads the FCoE, the WWN appears on the fabric and on the FC SAN. The system is now ready to connect to Fibre Channel storage. See Dell PowerStore 1000T for how to create host groups and map volumes to the target host. Dell Technologies PowerEdge MX – Networking – Deployment Guide

Claims	Exemplary Evidence of Infringement
	Chassis setup requirements This section provides initial conditions of the chassis, servers, and storage sled before beginning network configuration. The installation and setup of the chassis and servers are not within the scope of this document. Initial MX7000 chassis and server conditions: • MX7000 chassis installed and powered on (includes MX9002m modules) • MX740c vSAN Ready Node servers (4qty) installed in chassis • MX5108n switches installed in fabric A1, A2, B1, and B2 • MX7000 chassis management access configured (IP addresses assigned to chassis management) • Best practice - Update all associated firmware and software PowerEdge MX7000 vSAN Ready Node Deployment Guide

Claims	Exemplary Evidence of Infringement

PowerEdge MX

PowerEdge MX kinetic infrastructure, designed for the modern software-defined data center, delivers optimal utilizaiton, productivity and efficiency. With an industy-leading no midplane and scalable fabric architecture, PowerEdge MX will support new processor technologies, new storage types, and new connectivity innovations well into the future. This modular 7U integrated solution designed for enterprise data center density with easy deployment and management is ideal for a variety of workloads including dense virtualization, software-defined workloads, including SDS and HCI, and big data environments.

PowerEdge Architecture	PowerEdge MX
	
Form factor	7U enclosure with 8 slots
Description	Modular chassis that accommodates a variety of compute and storage sled combinations, connected by high-speed fabrics, sharing power, cooling and managed by embedded OpenManage Enterprise – Modular Edition systems management
I/O slots	2 USB 2.0 Type A or KVM control (keyboard and mouse only) 1 Mini Display Port connector for video
Server Sleds	Up to 8 PowerEdge MX740c Up to 4 PowerEdge MX840c
Storage Sleds	Up to 7 PowerEdge MX5016s
Power Supplies	Up to 6 PSUs; Platinum rated – 3000W output with high line AC input; N+1 or Grid redundancy support
Fans	5 80 mm rear and 4 60mm front hot-swap fans
I/O and Ports	Up to 2 pairs of redundant general-purpose switch or pass-through modular bays (Fabrics A and B); redundant pair of storage specific switch bays (Fabric C) Up to 25Gbps Ethernet, 32Gbps Fibre Channel, 12Gbps SAS
Embedded Management	OpenManage Enterprise – Modular Edition (OME-Modular); running on up to 2 redundant MX9002m management modules Quick Sync 2 Bluetooth Low Energy (BLE)/ wireless module option

Claims	Exemplary Evidence of Infringement

PowerEdge MX Components	MX750c	MX740c	MX840c	MX5016s
				
Form factor	Single-width, 2-socket server sled	Single-width, 2-socket server sled	Double-width, 4-socket server sled	Single-width, direct-attached storage sled
Description	High-performance modular compute sled with exceptional scale	Efficient, feature-rich modular server for modern data center	Scalable, high-performance modular server for modern data center	Dense, scale-out storage sled with flexible performance and capacity options
Ideal workloads	Virtualization, power, thermal, system management, and usability workloads	Virtualization, software-defined, collaborative workloads	Software-defined and demanding, database-driven workloads	SDS (vSAN), SQL, ERP and dense virtualization
Chassis enclosure	Up to 8 sleds per MX7000 7U chassis	Up to 8 sleds per MX7000 7U chassis	Up to 4 sleds per MX7000 7U chassis	Up to 7 sleds per MX7000 7U chassis Requires a minimum 1 compute node in a chassis with storage sleds
Processor	2 x 3rd Generation Intel Xeon Scalable processors with up to 40 cores per processor	Up to two 2nd Generation Intel® Xeon® Scalable processors, with up to 28 cores per processor; TDP 70-205W	Two or four 2nd Generation Intel® Xeon® Scalable processors, with up to 28 cores per processor; TDP 70-205W	Not Applicable
Memory	32 DDR4 DIMM slots, supports RDIMM max 2TB or LRDIMM max 4TB, speeds up to 3200 MT/s. Up to 16 Intel Persistent Memory 200 series (BPS) slots, max 8TB	24 DIMMs in total; supports DDR4 RDIMMs, LRDIMMs, NVDIMM-Ns Maximum capacity: (RDIMM): 1.5TB (LRDIMM): 3TB (NVDIMM-N): 192GB DDR4 speeds up to 2933 MT/s	48 DIMMs in total; supports DDR4 RDIMMs, LRDIMMs, NVDIMM-Ns Maximum capacity: (RDIMM): 3TB (LRDIMM): 6.1TB (NVDIMM-N): 192GB DDR4 speeds up to 2933 MT/s	Not Applicable
Disk	4 x 2.5-inch or 6 x 2.5-inch SAS/SATA (HDD/SSD)	Up to 6 x 2.5" SAS/SATA (HDD/SSD) or NVMe PCIe SSD drives plus optional M.2 boot	Up to 8 x 2.5" SAS/SATA (HDD/SSD) or NVMe PCIe SSD drives plus optional M.2 boot	Up to 16 x 2.5" SAS (HDD/SSD) per storage sled

Dell EMC PowerEdge Quick Reference Guide

Claims	Exemplary Evidence of Infringement

Installing the PERC card

Prerequisites

1. Follow the safety guidelines listed in Safety Instructions.
2. Follow the procedure listed in Before working inside the sled.

Steps

1. Pull the blue pull tag to raise the lever up on the PERC card.
2. Align the connector on the PERC card with the connector on the system board.
3. Align the guides on the PERC card with the slots on the system.
4. Press the PERC card to firmly seat in the system board connector.
5. Close the lever on the PERC card.

Next steps

1. Connect the cable to the PERC card.
2. Follow the procedure listed in After working inside your sled.

Dell EMC PowerEdge MX740c Installation and Service Manual

The PowerEdge RAID Controller (PERC) 10 series consist of the H345, H740P, H745, H745P MX, and H840 cards. The PERC 10 family of storage controller cards has the following characteristics:

- Complies with serial-attached SCSI (SAS) 3.0 providing up to 12 Gb/sec throughput.
- Supports Dell-qualified serial-attached SCSI (SAS) hard drives, SATA hard drives, and solid-state drives (SSDs).
- Offers RAID control capabilities including support for RAID levels 0, 1, 5, 6, 10, 50, and 60.

Dell PowerEdge RAID Controller 10 User's Guide PERC H345, H740P, H745, and H840 Series Controllers

Claims	Exemplary Evidence of Infringement

Hardware and software RAID

RAID can be implemented with either hardware or software. A system using hardware RAID has a RAID controller that implements the RAID levels and processes data reads and writes to the physical disks. When using software RAID provided by the operating system, the operating system implements the RAID levels. For this reason, using software RAID by itself can slow the system performance. You can, however, use software RAID along with hardware RAID volumes to provide better performance and variety in the configuration of RAID volumes. For example, you can mirror a pair of hardware RAID 5 volumes across two RAID controllers to provide RAID controller redundancy.

RAID concepts

RAID uses particular techniques for writing data to disks. These techniques enable RAID to provide data redundancy or better performance. These techniques include:

- Mirroring — Duplicating data from one physical disk to another physical disk. Mirroring provides data redundancy by maintaining two copies of the same data on different physical disks. If one of the disks in the mirror fails, the system can continue to operate using the unaffected disk. Both sides of the mirror contain the same data always. Either side of the mirror can act as the operational side. A mirrored RAID disk group is comparable in performance to a RAID 5 disk group in read operations but faster in write operations.
- Striping — Disk striping writes data across all physical disks in a virtual disk. Each stripe consists of consecutive virtual disk data addresses that are mapped in fixed-size units to each physical disk in the virtual disk using a sequential pattern. For example, if the virtual disk includes five physical disks, the stripe writes data to physical disks one through five without repeating any of the physical disks. The amount of space consumed by a stripe is the same on each physical disk. The portion of a stripe that resides on a physical disk is a stripe element. Striping by itself does not provide data redundancy. Striping in combination with parity does provide data redundancy.

Dell EMC Server Administrator Storage Management 9.4 User's Guide

Claims	Exemplary Evidence of Infringement
	B.3.3 Create LUNs and configure host access 1. In the **Unisphere** left pane under **STORAGE**, select **Block** 2. On the LUNs tab, click the (+) icon to open the **Create LUNs** dialog box. 3. On the Configure LUN(s) page, select the Number of LUNs. 4. Provide a name in the field provided, then select the **Storage Pool**. 5. From the Size section, make the required modifications, then click **Next.** 6. On the **Access** page, click the (+) icon and the select host(s) to be granted access to the LUN 7. Click **OK**, then click **Next**. 8. On the **Snapshot** page, leave settings at their defaults and click **Next**. 9. On the **Replication** page, leave settings at their defaults and click **Next.** 10. On the **Summary** page, review the details and click **Finish** to create the LUN. 11. On the Results page, click Close when Overall status shows 100% Completed. Create additional LUNs and grant access (map) to hosts as needed. Dell EMC PowerEdge MX Series Fibre Channel Storage Network Deployment with Ethernet IOMs
1 [c] [ii] use fibre channel port identifiers of the one or more storage targets to communicate with the one or more initiators during the storage operations over the first set of fibre	The Accused Products use fibre channel port identifiers of the one or more storage targets to communicate with the one or more initiators during the storage operations over the first set of fibre channel proxy ports. For example, the Accused Products offer "16 internal server facing ports" and "provide management support for 'virtual identities'" where "devices can assume a set of alternate identity values, called a virtual identity, and function on the network using that identity, as if the virtual identity were its factory-installed identity." For example, the Accused Products use "FC identities," which are virtual identities required by a device to support virtual FC operations" and include an "Identity Pool wizard page for defining an FC virtual identity pool." For example, the Accused Products include one "MX9116n Fabric Switching Engine (FSE)" with "SmartFabric OS10" "Software" that "can support eight 32Gb Fibre Channel connections . . . enabling direct attachment of a FC storage array and as a NPIV Proxy Gateway to an existing FC SAN." *See, e.g.*:

Claims	Exemplary Evidence of Infringement
channel proxy ports; and	The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 Dell EMC PowerEdge MX Networking Architecture Guide The Dell EMC Networking MXG610s has a flexible architecture which enables enterprises to dynamically scale connectivity and bandwidth with the latest generation of Fibre Channel for the PowerEdge MX7000. The MXG610s features up to 32 Fibre Channel ports, which auto-negotiate to 32, 16, or 8 Gbps speed. The MXG610s offers 16 internal server facing ports which auto-negotiate between 32 Gbps and 16 Gbps, allowing customers to implement the right bandwidth for their needs today, with the ability to increase that bandwidth in the future with Ports-on-Demand capability. There are 8 external

Claims	Exemplary Evidence of Infringement
	MXG610s SPEC SHEET Devices come with unique manufacturer-assigned identity values pre-installed (such as a factory-assigned MAC address). Those identities are fixed and never change. However, devices can assume a set of alternate identity values, called a "virtual identity", and function on the network using that identity, as if the virtual identity were its factory-installed identity. The use of virtual identity is the basis for stateless operations. MX7000 Chassis provides management support for "virtual identities". Just like factory-installed identities, virtual identities must also be unique on the network. Using virtual identities enables MX7000 Chassis to support operations such as shifting (migrating) a full device configuration, including its virtual identity, from one server to another. In other words, a virtual identity can be removed from one device and assigned to a different device (for example, in case the original device stops working or needs maintenance). FC identities are virtual identities required by a device to support virtual FC operations. The FC page of the Identity Pool wizard is used to define a sub-pool to use for generating unique FC virtual identities. The following values are specified to define a sub-pool for generating unique FC virtual identities: • Starting Postfix and Count As mentioned earlier, Fibre Channel requires 8-octet virtual WWNN addresses (for nodes) and virtual WWPN addresses (for ports on a node). In MX7000 Chassis, the Identity Pool wizard page for defining an FC virtual identity pool has a starting postfix value, which takes a 6-octet value, and a count. Like it does for generating unique FC virtual WWNN and WWPN addresses for FCoE (as discussed above), MX7000 Chassis prepends a two-octet prefix to each 6-octet value defined by the Postfix and Count values entered for a pool. The same prefixes are used as were indicated for FCoE. PowerEdge MX7000: Templates and Profiles

Claims	Exemplary Evidence of Infringement
	Some of the attributes that are in a template are referred to as identity attributes. Identity attributes identify a device and distinguish it from all other devices on the network. Since identity attributes must uniquely identify a device, it is imperative that each device has a unique network identity. Otherwise, devices cannot communicate with each other over the network. Devices come with unique manufacturer-assigned identity values preinstalled, such as a factory-assigned MAC address. Those identities are fixed and never change. However, devices can assume a set of alternate identity values, called a "virtual identity." A virtual identity functions on the network using that identity, as if the virtual identity was its factory-installed identity. The use of virtual identity is the basis for stateless operations. OME-M uses identity pools to manage the set of values that can be used as virtual identities for discovered devices. It controls the assignment of virtual identity values, selecting values for individual deployments from predefined ranges of possible values. This allows the customer to control the set of values which can be used for identities. The customer does not have to enter all needed identity values with every deployment request, or remember which values have or have not been used. Identity pools make configuration deployment and migration easier to manage. The most common connectivity method, NPIV Proxy Gateway mode (NPG) is used when connecting PowerEdge MX to a storage area network that hosts a storage array. NPG mode is simple to implement as there is little configuration that must be done. The NPG switch converts FCoE from the server to native FC and aggregates the traffic into an uplink. The NPG switch is effectively transparent to the FC SAN, which "sees" the hosts themselves. This mode is supported only on the MX9116n FSE. OS10 supports configuring N_Port mode on an Ethernet port that connects to converged network adapters (CNA). NPG node port (N_Port) is a port on a network node that act as a host or initiator device and is used in FC point-to-point or FC switched fabric. N_Port ID Virtualization (NPIV) allows multiple N_Port IDs to share a single physical N_Port. Dell Technologies PowerEdge MX – Networking – Deployment Guide
1 [c] [iii] use fibre channel port identifiers of the one or more initiators to communicate with the one or more storage targets during the storage operations over the	The Accused Products uses fibre channel port identifiers of the one or more initiators to communicate with the one or more storage targets during the storage operations over the second set of fibre channel proxy ports. For example, the Accused Products include one "MX9116n Fabric Switching Engine (FSE)" with "SmartFabric OS10" "Software" that "can support eight 32Gb Fibre Channel connections . . . enabling direct attachment of a FC storage array and as a NPIV Proxy Gateway to an existing FC SAN." For example, the Accused Products use "NPIV Proxy Gateway mode (NPG) . . . when connecting PowerEdge MX to a storage area network that hosts a storage array" where a "NPG node port (N_Port) is a port on a network node that act[s] as a host or initiator device," making the "NPG switch . . . effectively transparent to the FC SAN, which 'sees' the hosts themselves." For example, the Accused Products "provide management support for 'virtual identities'" where "devices can assume a set of alternate identity values, called a virtual identity, and function on the network using that identity, as if the virtual identity were its factory-installed identity." For example, the Accused Products use "FC identities,"

Claims	Exemplary Evidence of Infringement
second set of fibre channel proxy ports.	which are "virtual identities required by a device to support virtual FC operations" and include an "Identity Pool wizard page for defining an FC virtual identity pool." *See, e.g.*: The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 The MX7000 includes three I/O fabrics. Fabrics A and B are for Ethernet and future I/O module connectivity, and Fabric C is for SAS and Fibre Channel (FC) connectivity. Each fabric provides two slots to provide redundancy. Figure 6 shows the rear of the PowerEdge MX7000 chassis. From top to bottom the chassis is configured with: • One Dell EMC Networking MX9116n Fabric Switching Engine (FSE) installed in fabric slot A1 • One Dell EMC Networking MX7116n Fabric Expander Module (FEM) installed in fabric slot A2 • Two Dell EMC Networking MX5108n Ethernet switches installed in fabric slots B1 and B2 • Two Dell EMC Networking MXG610s Fibre Channel switches installed in fabric slots C1 and C2 • Two Dell EMC PowerEdge MX9002m modules that are installed in management slots MM1 and MM2 Dell EMC PowerEdge MX Networking Architecture Guide

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	Some of the attributes that are in a template are referred to as identity attributes. Identity attributes identify a device and distinguish it from all other devices on the network. Since identity attributes must uniquely identify a device, it is imperative that each device has a unique network identity. Otherwise, devices cannot communicate with each other over the network. Devices come with unique manufacturer-assigned identity values preinstalled, such as a factory-assigned MAC address. Those identities are fixed and never change. However, devices can assume a set of alternate identity values, called a "virtual identity." A virtual identity functions on the network using that identity, as if the virtual identity was its factory-installed identity. The use of virtual identity is the basis for stateless operations. OME-M uses identity pools to manage the set of values that can be used as virtual identities for discovered devices. It controls the assignment of virtual identity values, selecting values for individual deployments from predefined ranges of possible values. This allows the customer to control the set of values which can be used for identities. The customer does not have to enter all needed identity values with every deployment request, or remember which values have or have not been used. Identity pools make configuration deployment and migration easier to manage. The most common connectivity method, NPIV Proxy Gateway mode (NPG) is used when connecting PowerEdge MX to a storage area network that hosts a storage array. NPG mode is simple to implement as there is little configuration that must be done. The NPG switch converts FCoE from the server to native FC and aggregates the traffic into an uplink. The NPG switch is effectively transparent to the FC SAN, which "sees" the hosts themselves. This mode is supported only on the MX9116n FSE. OS10 supports configuring N_Port mode on an Ethernet port that connects to converged network adapters (CNA). NPG node port (N_Port) is a port on a network node that act as a host or initiator device and is used in FC point-to-point or FC switched fabric. N_Port ID Virtualization (NPIV) allows multiple N_Port IDs to share a single physical N_Port. Dell Technologies PowerEdge MX – Networking – Deployment Guide